

to enable the parents to go out together and this proved to be the first evening out that they had had for a year. Help for this family still continues with visits once or twice weekly and additional help as it is needed.

Christmas, with its family festivities and a modern tendency to material self-indulgence, inevitably highlights the problems of those who are lonely and unhappy. We therefore found that we were particularly busy at that time. A call was received at 11 pm on Christmas Eve from the health visitor. She had visited a widow of 55 whose husband had died 18 months previously. This lady had been admitted to the local mental hospital on 20 December after taking an overdose of sleeping tablets. The health visitor asked that she should be visited and befriended over the Christmas holidays as she was living entirely alone. The co-ordinator visited her later on the same day and found her very depressed. She arranged that the patient should go out to lunch and tea with two families with young children and this was much appreciated by the patient. Helpers made further visits on Boxing Day and on the following day they found that the patient was much happier. Weekly visits to this patient continue. A tragedy was suspected at the home of one elderly patient for whom the group were providing lunches over the Christmas holiday. As the house was locked and apparently lifeless at 3 pm on 27 December, the police were called in. When they had forced their way in, they were greeted by an irate old lady who asked why they insisted on waking her up before breakfast.

In our modern society, where material progress and better communications have led to a hectic pace of life, the security and value of the family unit is threatened. The sense of belonging to a community is often lost in modern towns and it is easy to live quite anonymously. The Welfare State provides for many material needs of the community and the group in no way tries to replace this. 'Friends in Need' tries to add a personal caring for those in distress. As the work of the group has grown, it has been found to be of mutual help to patients and helpers alike. The group predominantly consists of housewives and mothers who make some sacrifices in their desire to serve in this way. It is considering wider spheres of service as it finds opportunities in the community and as the number of helpers increase, but its primary aim of an efficient organization for the care of the individual in the community will remain.

CLINICAL NOTE

Psittacosis

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Hay on Wye

INFECTION OF HUMAN BEINGS WITH organisms of the psittacosis group is thought to be uncommon in this country, but the initial treatment of most chest infections encountered in general practice with tetracyclines may hide the true incidence of the disease because of the sensitivity of the organisms to this antibiotic. A history of contact with birds is not always found even on close questioning.

A small outbreak involving four patients, only two of whom had a tenuous history of recent contact with birds was encountered in the spring of 1970 in a small rural practice.

Case 1. A schoolteacher, aged 36 years, developed anorexia and lassitude, but did not consult a doctor until a cough developed ten days later, productive of clear sputum.

Examination: She was a rather obese woman who had recently lost a stone in weight. There was some tenderness of the muscles of the neck and she admitted to headaches. T = 98° F. (36.7° C.), Pulse rate = 74/min. Respiration rate = 30/min. Clinical examination of the lung fields was normal.

Investigations: Chest x-ray showed an atypical pneumonia mainly confined to the bases. Serology: Psittacosis titre positive at 1/128. Haemoglobin = 97 per cent. (14.1G), WBC = 6,200/cmm. Differential = normal: ESR (Wintrobe) = 5mm/1st hr.

Treatment with tetracycline 500 mgm q.d.s. for one week followed by 250 mgm q.d.s. for a second week produced a dramatic clinical improvement. (A suitable tablet incorporating the tetracycline with a

suitable anti-fungal agent was used from the start of the treatment because of the anticipated length of the therapy).

The psittacosis titres fell as follows: Initial titre = 1/128 dilution; after one month, 1/64; and after three months, 1/32.

Case 2. A 45-year-old farmer complained of headaches, anorexia and weight loss. A cough, productive of mucopurulent sputum, had developed about one week later.

Examination: An ill man with a faint macular rash over his chest and abdomen. T = 99° F. (37.2° C.); Pulse rate = 60/min. Respiration rate = 34/min. The lung fields revealed scattered rhonchi over both lungs.

Investigations: X-ray—bronchopneumonic patches both lung fields. Serology: Psittacosis titre positive at 1/256. Haemoglobin = 89 per cent. (13 G.), WBC = 6,700/cmm. Differential count = normal ESR (Wintrobe) = 40 mm/1st hr.

Treatment. Tetracycline therapy in the same dose described in Case 1, resulted in a similar dramatic improvement in his general condition and the resolving of the patches of bronchopneumonia on the x-ray films.

The psittacosis titres fell as follows: Initial titre 1/256 dilution; after one month, 1/128; and after three months, 1/32.

Case 3. A 39-year-old carpenter presented with a three-week-old history of anorexia, general malaise, headaches and the loss of one stone in weight. For one week he had a cough productive of clear sputum.

Examination: T = 98° F., Pulse = 74/min., Respiration rate = 30/min. No abnormality could be found on clinical examination of the chest. The spleen was just palpable. There was some neck stiffness.

Investigations: x-ray—a resolving bronchopneumonia. Serology = psittacosis titre positive at 1/128 dilution: Haemoglobin = 104 per cent. (15.1 G.); WBC = 4,000/cmm. Differential count = normal. ESR (Wintrobe) = 50 mm/1st hr.

Treatment. Tetracycline therapy with similar responses to those encountered in Cases one and two.

The psittacosis titre fell as follows: Initial titre 1/128 dilution: after one month, 1/64; and after three months, 1/32.

Case 4. One month after her father's illness the six year old daughter of the carpenter described in case three, developed lassitude and anorexia, and one week later a dry cough.

Examination: T = 97° F. (36.5° C.), Pulse = 90/min., Respiration rate = 30/min. Clinical examination of all systems was normal.

Investigations: x-ray—two small areas of patchy consolidation at the lung bases. Serology: psittacosis titre positive at 1/128 dil.

Treatment. Two weeks course of a suitable tetracycline. The psittacosis titre fell to 1/16 after one month.

Discussion

In 1879 a Swiss physician, Ritter first described seven cases of an unusual pneumonia in patients who had handled tropical birds. In 1894 Marange established the parrot as the vector and called the disease psittacosis—after the Greek word *psittakos* meaning parrot.

The disease became more widely known following an epidemic in 1929–30, which was traced to a shipment of 5,000 birds of the parrot family from Brazil into Argentina. Dr K. F. Meyer investigated the pandemic and reported:

“A distinctive infection, in the light of present day knowledge unquestionably psittacosis had broken out, and the managers, anxious to sell as many living birds as possible, disposed of their stocks with great rapidity. Purchasers, auctioneers, etc., became ill and some died. The auction was then transferred to Tucumán, the bird mortality continued, and with it human cases flared up in every quarter of the city. Local attention was directed to the strange disease when several epidemics developed in the capital of Argentina, Buenos Aires, during the month of October, particularly when two members of a theatrical troupe of twelve persons died, all of whom fell ill following the use on stage of a parrot which came from the original importation into Cordoba. These events fully warned the population and the trade of parrots was stopped entirely in Argentina. However, the passengers of steamers calling at the ports, ignorant of the existence of an epidemic disease of parrots transmissible to man, brought many of the infected birds from unscrupulous dealers. Thus the malady was conveyed to at least 12 different countries. . . .”

Originally parrots and parakeets were thought to be the sole vectors of the disease but the organism has been found in other birds including pigeons, ducks, domestic fowls, seagulls, petrels, canaries and finches. Cats and mice are susceptible to these infections and spontaneous infections of kittens have been reported. The birds themselves may not appear to be ill but on

closer examination may reveal ruffled, brittle feathers, loss of weight and lethargy. In these infected birds the infective organism can be found in the liver, spleen and myocardium and is excreted via the nasal secretions and faeces.

The organism is an intracellular parasite. Because the life cycle entered a phase of eclipse on penetration of the human cell it used to be classed with the larger viruses. They resemble the Rickettsial group in size and other features: they have only limited metabolic activity. The group may be a form of degenerate bacteria. Extra-cellular forms have several things in common with the bacterial group such as RNA and DNA; they synthesize folic acid from p-amino benzoic acid (which explains the susceptibility to the tetracycline group of drugs), and they have a rigid cell wall which contains at least one bacterial amino-acid—muramic acid. Serologically it is antigenically homogenous with such micro-organisms as lymphogranuloma venerum and trachoma.

Transmission to humans is almost always via the respiratory tract. Only a few minutes in an environment previously occupied by an infected bird can lead to human infection. Human-to-human transmission is reported as rare although this was almost certainly the mode of transmission between the father and daughter in cases three and four above. From the upper respiratory tract the organism gains entry into the blood stream and passes into both the reticulo-endothelial system and thereby to the liver and spleen, and to the alveoli of the lungs where interstitial lymphatic invasion occurs. Close examination of the sputum may show macrophages containing characteristic cytoplasmic inclusion bodies (LCL bodies).

The incubation period is between 6 and 15 days. The onset is usually gradual, consisting of a general malaise and anorexia. Headaches and myalgia of the neck muscles may lead to a suspicion of meningitis. The faint macular rash on the trunk (noted in case 2 only in this series) is called Horder's spots. The incidence of these spots have been variously reported as between 20 and 70 per cent. Gastro-intestinal upsets, epistaxis, photophobia and jaundice have also been reported.

Differential diagnosis lies between other viral pneumonias, bacterial pneumonias, mycoplasmal pneumonias, influenza, Q-fever, tuberculosis, histoplasmosis and coccidiomycosis.

The common outstanding features encountered in this small outbreak were the gradual onset, general malaise and anorexia which preceded the onset of the cough by at least one week. The general condition of the patient was always much worse than might reasonably be expected from the few physical signs elicited, of which a high respiratory rate and a relative bradycardia were outstanding. Investigations were more helpful. A chest x-ray showed a primary atypical pneumonia, the blood picture was one of a low white cell count with a normal differential count, serology showed a high psittacosis titre. It is interesting to note that in the three adults the titre levels fell to normal slowly after the clinical resolution of the disease, whereas in the child—psittacosis in children is supposedly rare—the fall in the titre levels was four-fold (1/128 initially to 1/16 later) in four weeks.

In case 1 the only history of contact with any type of birds was a visit to a falconry in Ireland six weeks before the onset of the symptoms. In case 2 the farmer had found a dead Mallard duck on his fields about four weeks before the illness. In case 3 there was no history of contact with any type of birds for at least twelve months. His daughter—case 4—developed the initial symptoms about three weeks later.

Cases 1, 2 and 3 were unknown to each other, moved in different social circles and lived at least three miles apart.

By tradition this disease is called psittacosis, dating from the time when birds of the Psittacine group were thought to be the only vectors. We now know that many different types of birds can carry this disease and it would be more accurate to call it ornithosis.

The tetracycline group of drugs are probably the most common initial treatment of chest infections in general practice. It may be that infection with the psittacosis—ornithosis group of organisms is much more common than we realize and that the true incidence of the disease in the community is masked by the susceptibility of this organism to this widely prescribed drug.
